University of Oregon

Promoting Graduate Students' Development through Graduate School and Beyond

January 30, 2012

Talk for DGSs

Final title and description: 1. Talk to the faculty Directors of Graduate Studies.
" **Promoting Graduate Students' Development through graduate school and beyond"**

What I would talk about here is the role of faculty (as advisors) and departments (in how the program is structured) in helping students to develop as researchers, teachers and emerging professionals. (I won't talk much about teaching, so that is why it isn't in the title.) I will talk about apprenticeship pedagogy and about intellectual communities. I will also talk about the importance of helping students to figure out what their passions and paths are, and helping them help themselves.

She said: • the need to be much more intentional and effective about career and professional development – and how to do that effectively – so students have more successful and diverse career opportunities in and beyond the academy, and [I think that this can get woven into the Advising and Communication section.]

• what means to support the development of rich and diverse intellectual communities for grad students — within and beyond departments – and why having access to richer interdisciplinary learning/discussion opportunities is crucial to both the intellectual and social development of students and what you have seen as successful that institutions have piloted or created toward these ends]

HANDOUTS FOR PACKET: Expectations Scales & Advising Conversations Worksheet

I.   Introduction/Overview [slide 1]

A. Thank yous

Thank you, Sandi.

It is really a pleasure to be here. I have been looking forward to this.

As you know, Univ of Oregon as a long history. It was found in 1876 (older than Stanford) and the graduate school being organized in 1900.

In that 135 years, the American higher education enterprise has experienced phenomenal growth:

- number of institutions,
- students,
- fields of study,
- money,
- expectations placed on Universities.

We now have a complex ecosystem, and as a result there are tremendous, and competing, pressures on faculty time.

I am very appreciative that you are taking the time to think about graduate education.

II.   What is the goal of graduate education? Dev Trajectories [slide 2]

A. Developmental trajectories

Recently, I have been thinking of graduate education in terms of "graduate student development."

Note that this schematic focuses on doctoral students, but we certainly can use the same frame of "development" to think about master's students or students in professional degree programs.

This schematic describes students' development into emerging academic professionals (a young scientist, a new historian). This involves learning the knowledge, skills and habits of mind of a junior member of the guild.

This schematic implies that there are some predictable ways in which students grow and change. The term "development" suggests an on-going process. Development continues after, this focuses on the grad edu period.

It turns attention to how and by whom development is promoted or impeded.

The temporal dimension describes students' development over time, in three stages.

- Stage 1: first year
- Stage 2: middle years
- Stage 3: last 1-2 years.

The content dimension describes the three domains in which students develop that are the primary emphasis of doctoral education.

Although the University provides resources to help students with their personal and emotional lives, for the most part we assume that other domains (e.g., psychosocial development) are handled by virtue of students' personal resources and the natural maturation process. This narrower focus on these 3 domains distinguishes graduate education from undergraduate studies.

- **Development as a researcher & scholar**

- **Development as a teacher**

- **Developing a professional identity**

  Developing a professional identity involves acquiring the habits of mind and adopting the values of members of the disciplinary community.

Note that this may <u>seem</u> to focus on academic careers, but I don't intend that at all. Important to distinguish between the development into a <u>professional</u>, possessing knowledge, skills, and habits of mind, as distinct from the <u>venue</u> in which the professional works.

The balance of how one uses particular skills might differ – teaching in a community college different from teaching in a research university different from teaching in a museum or a biotech company or a geosciences firm. But everyone is explaining content and mentoring others – those are both forms of teaching.

So let me emphasize again, that I think it is crucial that we recognize that students will move into a variety of interesting careers, and that that is a good thing for them, for our economy and for our disciplines.

[SLIDE 2A]

We can then see that students develop along these trajectories, from

Novice → emerging expert

Dependence → independence

Little sense of professional identity → understanding and adoption of professional norms and values

This schema is helpful, because it raises questions like:

- What do we expect of students in each domain at each stage?
- What are potential problems?
- How are we doing? How are our students doing?

So what is our role in helping students develop effectively, and to with their full potential?

How do we "Promote Graduate Students' Development through Graduate School and Beyond," to remind you of the title of my talk.

Well, it is done through the <u>formal structures and educational experiences</u> we offer to students, and through <u>the individual relationships</u> through which students learn.

III.   We don't know how students learn at this level [SLIDE 3]

But it turns out to be much easier said than done.

It is surprising how little systematic attention has been paid to understanding how to develop expertise and how to promote student learning at this level.

As a result, faculty are operating on instinct and/or replicating how they were taught.

We all operate with implicit assumptions of how students learn (or how they should be taught)

A. Implicit theories of graduate education

By way of example, let's consider the first domain of development on the earlier slide, which was the "development as researcher and scholar."

There are, I think, several theories in wide spread use.

osmosis theory *(Slide 3a)*

- Students learn by reading good research and being near faculty who are doing high-quality research . Then they will absorb what they need to know.

the sink or swim theory *(Slide 3b)*

- Students are thrown into their initial teaching experience — or research assignment -- and thrash their way to completion of the assignment with little guidance. Those who succeed may know something about swimming by virtue of their prior education or by from their families.

the talented-students-will-self-discover assumption *(Slide 3c)*

- Holds that graduate programs get out of the way of students' self-development. Good students figure out what they need to know and go get it. Those without the internal resources, the skills, or self-confidence to learn what they need, may abandon the process.

the high-pressure crucible *(Slide 3d)*

- A graduate program is a high-pressure crucible that proceeds as a set of high-stakes tests and hurdles. Throughout the process the stakes are high, the students are expected to perform at a very high level. This, the theory says, makes them stronger. Those who are less capable are weeded out.

the high support model*(Slide 3e)*

- Everyone should succeed and we must provide as much help as possible.
- Has a social justice element in it.
- Highly structured, cohort based programs, often found in professional schools,

You may recognize yourself, your colleagues, or your own training in one of these.

B. Reappropriating Apprenticeship [Slide 4]

You may have noticed that Apprenticeship wasn't on the list.

Especially with students, the word "apprenticeship" has a bad reputation. As a theory of graduate education, it implies indentured servitude and the total dependence on one advisor who controls the student.

It suggests conformity, and may result in the inability to develop independent voice and line of thought. At its worst, there may be neglect or exploitation of the student.

I think that it is time to re-appropriate the term *apprenticeship*. Key move: Shift from seeing students as apprenticed *to* a master, to recognizing that they are apprenticed *with* an experienced mentor.

Apprenticeship pedagogy has a long, and honorable history in graduate education. It was referred to as "elbow learning" by G. Stanley Hall, first president of Clark University and a psychologist who was first president of the American Psychological Association. Noted for his training of doctoral students.

The Darwinian models described earlier do little to actively promote learning or take a deliberate guiding hand in the formation of scholars. The cognitive sciences have shown us that most people learn more and develop further in a more purposefully constructed environment.

C. Apprenticeship pedagogy [Slide 5]

How does this work? It is not unlike craft apprenticeship.

Students learn by:

1. Observing expert practice, and then try it.

2. Often by breaking the whole apart into constituent components,

3. construct occasions and assignments that allow students to practice key tasks.

   - These might be simulations (defending a grant proposal to a mock panel review), or
   - problems with known solutions (as is done in mathematics),
   - well designed small components of a larger work (a course on scholarly publication or rotations assignment).

4. The student engages in repetitive practice with coaching and feedback to promote improvement. Provide coaching so students develop their own feedback mechanisms

5. Iterate towards independence.

6. help students integrate components into the whole

Expects a lot of faculty and students

Mentors:

   - be expert,
   - understand their expertise well enough to be able to model the whole,
   - develop strategies for teaching the constituent components,
   - help students integrate them back into the whole
   - know when to offer guidance, and when to let students try and fail.
   - have an internal model of the typical student's development over time,
   - experience with the kinds of scaffolding and coaching that will move students along the trajectory towards expertise and independence
   - customize learning experiences for each student, whom they know well.

Students:
   - must adapt to a new way to learn, especially unfamiliar in the context of formal schooling.
   - To practice, practice, practice (research as craft) (10,000 hours)
   - take active responsibility for their own learning
   - to reflect on what they have done,
   - to develop models and patterns
   - to generalize to other contexts.
   - to take risks and be willing to fail.

IV.   Advising [slide 6]

So how can we foster the kinds of relationships that allow elbow learning to flourish?

This is a challenge facing graduate education at all Universities: advising.

Whenever I ask students, doctoral or master's students, how to improve the educational experience, the top response is "fix advising."

Students with "good" advising relationships, call themselves "lucky." Often apologetically. Shouldn't be a matter of luck.

A. Way of thinking about it

Let me highlight a few features of positive advising relationships, and provide some ideas of how to promote them.

1. Multiple Relationships [6A]

multiple mentoring relationships with several faculty members. Too much in these 3 domains for one super-mentor. For students considering a variety of career paths.

- Students should be encouraged to talk to many faculty.
- Important to teach students to build peer networks. Students can and should mentor each other. Encourage them to do so.

2. Respect, Trust, Open communication [6B]

Apprenticeship relationships are more likely to flourish when they are based on and cultivate the qualities of <u>respect, trust and open communication</u>. These qualities are important not simply because they make the relationship more pleasant; they are necessary conditions for learning. Deeply associated with maintaining high standards.

Starting from a stance of mutual respect, of each other as people and respect for ideas is crucial.

3. Respect, Trust, Open communication [6C]

Respect builds <u>trust</u> and <u>trust</u> is essential for <u>clear communication</u> and <u>honest feedback</u>.

Respect & trust help foster open communication, and vice versa.

One important approach is to set clear expectations, ideally early on, avoid escalating misunderstandings

B. Expectations Scales [SLIDE 7]

In your packet is a <u>Expectations Scales Worksheet.</u> Tool we are promoting at Stanford.

Instructions: No right answer, scales with equally valid end points. Areas which are often assumed, but shouldn't be.

- Complete items 2, 6, 11, & 16.
- Compare and discuss. Questions: why did you respond as you did? What would you say if a student responded differently?

PAUSE. TAKE COMMENTS.

On the back are ideas for how to use. We tell students, don't stick this in front of your advisor! This is a conversation best initiated by faculty.

C. More features of advising [SLIDE 8]

Let me highlight a few more features of advising.

1. Student Centered

One transformative idea, for me, was making every conversation focused on the student's success. Regardless of whether one is giving feedback for change (you need to do this to improve) or feedback for continuation (you did great at this, do more of it!) putting the student's learning and improvement at the center of the conversation really helps.

There is another **document** in your packet which we have begun promoting at Stanford:

<u>Annual Doctoral Student Degree- and Career-Progress Meeting Worksheet.</u>

It's provenance is on the back, started in the postdoc world, but we modified it for use with graduate students. One important role it can play is to open up the conversation about possible career paths.

The idea here is to make it a standard part of advising to have conversations about the student's future, and develop a plan to get there.

We often hear from students that they are reluctant to tell the faculty that they work with about their career goals, especially if they are outside of academia. This is designed to help initiate that conversation. And then, to help jointly craft a plan to help the student achieve that goal.

It overcomes the reluctance of starting the conversation. Designed to be customizable.

2. Share, Learn, Improve, and Recognize [8A]

Being a good mentor is not an innate talent, or a function solely of "chemistry." Very few of us have had a chance to learn how to give set expectations, give feedback, or how to have hard conversations.

In a survey of CID faculty members, we asked "Is there someone whose advising you try to emulate? " Most respondents identified their own primary adviser as a model (38 percent), but the most striking finding was that " no one " was the second most common response (33 percent). We did not ask how many had an "anti - role model" although several volunteered that fact.

- Communication techniques that can be <u>learned</u>. HR people have a lot of experience with this.
- Create occasions for faculty members to learn about and discuss one another's advising philosophies and strategies.
- Opportunities to discuss challenging moments might be particularly useful. Important for junior faculty.

3. Collective Responsibility [8B]

More than just encouraging multiple advising relationships, we bear a <u>collective responsibility</u> for student success. We need to recognize that students are admitted to departments and programs, not just to work with individual faculty members.

I urge you to think about these matters not just for your advisees, but for all students in your department.

- Is there a shared vision of student development?
- Is it ok to talk about various careers?

V.   Intellectual community [Slide 9]

So let's move from talking about individuals, to talking more about departments and programs.

When promoting graduate students' development we must create a positive culture and climate in departments.

I suspect that most of you have been in a department where you say "THAT is an exciting intellectual community." Think about that department: what made you say that?

PAUSE – ANSWERS IF UNDER ___ MIN

I believe that departments are more than convenient collections of faculty members. Good ones are vibrant, healthy intellectual communities. And I have never met a faculty member who DID NOT want that.

A. Five mutually reinforcing features of intellectual communities.

There are certain qualities of communities that make them more vibrant, enriching, stimulating and welcoming and more suited to the vision of apprenticeship and advising I described earlier.

1. Knowledge-centered

Knowledge creation and sharing is the purpose.

2. Diverse and Multi-generational

true intellectual exchange must include a wide range of opinions

- welcoming different points of view.
- People of different experiences and backgrounds
- Multigenerational: graduate students, postdoctoral fellows, and faculty .

Obligates senior members to active participation. Raises the question of how are junior members brought in?

3. Flexible and Forgiving

Risk taking. It is okay to make mistakes. To learn from failure. Faculty member who told students supposed to make mistake every day.

But most of us are risk averse.

"I just made a terrible mistake" ACTIVITY

4. Respectful and Generous

Should support interaction rather than isolation.   People are generous with their time, ideas, and feedback. Success and achievement are not a zero-sum game.

5. Deliberately tended

Takes time and effort to keep the community humming.

- bring new students in (Big Sib program.)
- Engaging students fully in the life of the department. (Inclusion on committees)
- Moving beyond lecture to intellectual exchange (1st 3 questions in seminar rule)
- Allowing risk and failure. (a seminar series in which speakers describe projects that didn't work, and how they proceeded from those failures, crazy ideas seminar)
- Social events. (social lubricrants should not be underestimated.)

Putting in to practice at Stanford with SPICE. : Departmental, interdisciplinary, communities of interest

- NUTMEG: Neuroscientists United Together, Making Exceptional Graduates
- SCIT: Greek Tragedy
- SAMMS
- SUPR

VI.   Summarize the big ideas [SLIDE 10]

To summarize, I have talked about three levers to positively affecting graduate student development.

- Understanding how students learn
- Improving advising relationships
- Building intellectual communities

Implicit in these steps is the encouragement to rethink current practices of graduate education.

So I hope that I have sparked your imagination and gotten you thinking and motivated to try some different things. Nothing big. I like to think of these as little experiments. Pilot projects

VII.   Sources of inspiration [SLIDE 11]

There is no shortage of ideas for what to do to promote student development. How to improve our current practices.

A. Trading ideas and practices

I hope you see each other as primary sources of inspiration, of new ideas

Great value in trading "how do you do it" in your department:

I strongly encourage you to open up those conversations among on campus across departments.

And you can also trade ideas with colleagues at other universities

I promise you that there is not an idea shortage!

You can ask about program elements.

- Courses
- Exams
- Committees

Or you can step back and ask bigger questions:

- how to foster creative thinking,
- how to keep students' passion alive,
- how to teach the ability to ask a good research question,

- how students develop critical judgment
- how much is enough, when are students ready to leave

B. Students as agents

Students are secret agents of change. Don't underestimate them. Make them your allies.

- Graduate students are smart and thoughtful about their own experience and its educational purpose,
- they have vested interest in the quality of their own experience and the quality of the educational experiences of those who will come after them,
- they have a tremendous amount of energy they are willing to give in the service of making change,
- and being involved in improving the graduate program is itself an important learning opportunity.

VIII. Conclusion [SLIDE 12]

Let me conclude by reminding you that this is terribly consequential. Helping our very smart and passionate students reach their full potential matters a great deal.

Any time I am in front of students, I thank them. I encourage them. I tell them how completely amazing that they are. It is a privilege to come to work every day to help them be as great as they are.

I hope you tell your students that too. Because it is so darn true.

Thank you.